Exploring Aeronautics								
2006 Science								
Program of Studies								
Kentucky Science								
Grade 5								
Activity/Lesson	State	Standards						
Fundamentals of			the more mass an object has, the less effect a					
Aeronautics (145-176)	KY	U-2	given force will have.					
			predict and support with evidence/justification,					
Fundamentals of		SCI.5.SC-5-MF-	changes in the motion of an object related to its					
Aeronautics (145-176)	KY	S-4	mass or the amount of force acting on it					
			predictions and/or inferences about the direction					
			or speed of an object can be made by					
Airplane Control(209-			interpreting graphs, charts or descriptions of the					
256)	KY	U-1	object's motion.					
			explain why scale models are important tools for					
			understanding a number of phenomena (e.g.,					
			solar system, watersheds, earth's atmosphere)					
			but are not always easy to construct or require					
Tools of		SCI.5.SC-5-EU-	trade-offs in other aspects of the model (e.g.					
Aeronautics(257-326)	KY	S-8	distance vs. size)					
		SCI.5.SC-5-MF-	the more mass an object has, the less effect a					
How an Airplane Flies	KY	U-2	given force will have.					
			create and interpret graphical representations in					
		SCI.5.SC-5-MF-	order to make inferences and draw conclusions					
How an Airplane Flies	KY	S-2	about the motion of an object					
			explain why scale models are important tools for					
			understanding a number of phenomena (e.g.,					
			solar system, watersheds, earth's atmosphere)					
			but are not always easy to construct or require					
The Tools of		SCI.5.SC-5-EU-	trade-offs in other aspects of the model (e.g.					
Aeronautics	KY	S-8	distance vs. size)					
			keep accurate records of investigations					
		SCI.5.SC-5-	(procedures, data) in order to support or dispute					
Science of Flight	KY	STM-S-3	conclusions					
		SCI.5.SC-5-MF-	the more mass an object has, the less effect a					
Science of Flight	KY	U-2	given force will have.					
			use observations and appropriate tools (e.g.,					
			timer, meter stick, balance, spring scale) to					
Science of Flight	KY	S-1	explore the relationship between force and mass					
			predict and support with evidence/justification,					
		SCI.5.SC-5-MF-	changes in the motion of an object related to its					
Science of Flight	KY	S-4	mass or the amount of force acting on it					
			predictions and/or inferences about the direction					
			or speed of an object can be made by					
Integrating with		SCI.5.SC-5-MF-	interpreting graphs, charts or descriptions of the					
Aeronautics	KY	U-1	object's motion.					
			use observations and appropriate tools (e.g.,					
Integrating with		SCI.5.SC-5-MF-	timer, meter stick, balance, spring scale) to					
Aeronautics	KY	S-1	explore the relationship between force and mass					

			results of investigations are seldom exactly the
Scientific Method(124-		SCI.5.SC-5-	same, but if the results vary widely, then it is
144)	KY	STM-U-5	necessary to figure out why they differ.
			work individually and with others to design and
			conduct fair tests to safely investigate properties
Scientific Method(124-		SCI.5.SC-5-	of matter, such as boiling point, density and
144)	KY	STM-S-2	solubility
			keep accurate records of investigations
Scientific Method(124-		SCI.5.SC-5-	(procedures, data) in order to support or dispute
144)	KY	STM-S-3	conclusions
,			use student-generated questions about the
Scientific Method(124-		SCI.5.SC-5-	properties of matter to drive inquiry-based
144)	KY	STM-S-4	learning experiences
, , ,			Treatment of the state of the s
		Exploring Aerona	utice .
		2006 Scienc	
			<u> </u>
Kontuoky Solonos		Program of Stu	uies
Kentucky Science			
Grade 6	04-4-	04	
Activity/Lesson	State	Standards	
		001000011	when any force acts on an object, the change in
Fundamentals of		SCI.6.SC-6-MF-	· ·
Aeronautics (145-176)	KY	U-2	direction of the force.
			use graphical and observational data to make
			inferences, predictions and draw conclusions
Fundamentals of		SCI.6.SC-6-MF-	about the motion of an object as related to the
Aeronautics (145-176)	KY	S-2	mass or force involved
			represent the motion of objects and their
Fundamentals of		SCI.6.SC-6-MF-	response to unbalanced forces in a variety of
Aeronautics (145-176)	KY	S-4	ways
The Tools of		SCI.6.SC-6-	plan, present and support information from
Aeronautics	KY	STM-S-8	investigations using a variety of modes
			investigate how important scientific advances
		SCI.6.SC-6-	have resulted from unexpected observations or
Science of Flight	KY	STM-S-7	experimental results
			use graphical and observational data to make
			inferences, predictions and draw conclusions
		SCI.6.SC-6-MF-	about the motion of an object as related to the
Science of Flight	KY	S-2	mass or force involved
Colonico oi i ligiti		<u> </u>	experimentally investigate the relationship
		SCI.6.SC-6-ET-	between temperature and heat transfer in closed
Science of Flight	KY	S-5	systems
Ocidina di Filgrit	IXI	J-J	use graphical and observational data to make
			inferences, predictions and draw conclusions
	1		about the motion of an object as related to the
Integrating with		COLCOCCAT	
Integrating with	107	SCI.6.SC-6-MF-	
Integrating with Aeronautics	KY	SCI.6.SC-6-MF- S-2	mass or force involved
Aeronautics	KY	S-2	mass or force involved investigate how important scientific advances
Aeronautics Scientific Method(124-		S-2 SCI.6.SC-6-	mass or force involved investigate how important scientific advances have resulted from unexpected observations or
Aeronautics	KY	S-2	mass or force involved investigate how important scientific advances have resulted from unexpected observations or experimental results
Aeronautics Scientific Method(124-		S-2 SCI.6.SC-6-	mass or force involved investigate how important scientific advances have resulted from unexpected observations or
Aeronautics Scientific Method(124-		S-2 SCI.6.SC-6-	mass or force involved investigate how important scientific advances have resulted from unexpected observations or experimental results
Aeronautics Scientific Method(124-	KY	S-2 SCI.6.SC-6-	mass or force involved investigate how important scientific advances have resulted from unexpected observations or experimental results mechanical systems must be designed to take

			use graphical and observational data to make
			inferences, predictions and draw conclusions
Scientific Method(124-		SCI.6.SC-6-MF-	about the motion of an object as related to the
144)	KY	S-2	mass or force involved
			scientists vary widely in what they study and
			how they do their work. While there is no fixed
			set of steps they follow, the basic process of
			science involves collecting relevant evidence,
			logical reasoning and the use of imaginative
Scientific Method(124-		SCI.6.SC-6-BC-	thinking in constructing explanations for what
144)	KY	U-3	they observe.
144)	IX I	0-3	they observe.
		⊥ Exploring Aerona	utics
	-	2006 Science	
		Program of Stud	
Kentucky Science			
Grade 7			
Activity/Lesson	State	Standards	
Activity/Lesson	State	Statiuarus	an object remains at rest or maintains a
Fundamentals of		SCI.7.SC-7-MF-	
	I//		constant speed and direction of motion unless
Aeronautics (145-176)	N I	U-1	an unbalanced force acts on it (inertia).
_ , , , ,		0017007145	forces acting against each other can be
Fundamentals of		SCI.7.SC-7-MF-	balanced, canceling each other out and having
Aeronautics (145-176)	KY	U-2	no net effect.
F		0017007145	to at the course and affect and attended in the transfer
Fundamentals of	107		test the cause and effect relationship between
Aeronautics (145-176)	KY	S-2	straight-line motion and unbalanced forces
Fundamentals of		COLT CO T ME	investigate beloweed and unbeloweed forces and
Fundamentals of	107		investigate balanced and unbalanced forces and
Aeronautics (145-176)	N I	S-3	their effect on objects and their motion
			make inferences and draw conclusions about
		0017007145	the motion of objects, and predict changes in
Fundamentals of	107	SCI.7.SC-7-MF-	position and motion as related to the mass or
Aeronautics (145-176)	KY	S-4	force
			an object remains at rest or maintains a
l		SCI.7.SC-7-MF-	constant speed and direction of motion unless
How an Airplane Flies	KY	U-1	an unbalanced force acts on it (inertia).
			forces acting against each other can be
		SCI.7.SC-7-MF-	balanced, canceling each other out and having
How an Airplane Flies	KY	U-2	no net effect.
		SCI.7.SC-7-MF-	investigate balanced and unbalanced forces and
How an Airplane Flies	KY	S-3	their effect on objects and their motion
			generate investigable questions and conduct
		SCI.7.SC-7-	experiments or non-experimental research to
Science of Flight	KY	STM-S-3	address them
			forces acting against each other can be
		SCI.7.SC-7-MF-	balanced, canceling each other out and having
Science of Flight	KY	U-2	no net effect.
		SCI.7.SC-7-MF-	test the cause and effect relationship between
Science of Flight	KY	S-2	straight-line motion and unbalanced forces
		COLT CO T ME	
		SCI.7.SC-7-MF-	investigate balanced and unbalanced forces and

Science of Flight	KY	S-4	force
		SCI.7.SC-7-MF-	·
Science of Flight	KY	S-5	distance moved in the direction of the force
Integrating with	100		test the cause and effect relationship between
Aeronautics	KY	S-2	straight-line motion and unbalanced forces investigate balanced and unbalanced forces and
Integrating with Aeronautics	KY	S-3	their effect on objects and their motion
Aeronaulics	IX I	3-3	make inferences and draw conclusions about
			the motion of objects, and predict changes in
Integrating with		SCI.7.SC-7-MF-	position and motion as related to the mass or
Aeronautics	KY	S-4	force
			investigations are conducted for different
			reasons, including to explore new phenomena,
			to check on previous results, to test how well a
Scientific Method(124-		SCI.7.SC-7-	theory predicts, and to compare different
144)	KY	STM-U-5	theories.
			generate investigable questions and conduct
Scientific Method(124-		SCI.7.SC-7-	experiments or non-experimental research to
144)	KY	STM-S-3	address them
			technology used to gather data enhances
Scientific Method(124-	101	SCI.7.SC-7-MF-	accuracy and allows scientists to analyze and
144)	KY	U-4	quantify results of investigations.
			make inferences and draw conclusions about
Colombific Mothod/101		SCI.7.SC-7-MF-	the motion of objects, and predict changes in
Scientific Method(124-144)	KY	S-4	position and motion as related to the mass or force
144)	IX I	J-4	compare the results from a variety of
			investigations (based on similar hypotheses) to
			identify differences between their
Scientific Method(124-		SCI.7.SC-7-BC-	outcomes/conclusions and propose reasonable
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144)	KY	S-4	explanations for those discrepancies
•	KY	S-4	explanations for those discrepancies
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144) Kentucky Science	KY	Exploring Aerona 2006 Science	nutics
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Kentucky Science Grade 8		Exploring Aerona 2006 Science Program of Stud	nutics